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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,111	12/05/2000	J. Roger Davis	DP-301396	8567

7590 03/29/2004

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EXAMINER	
NGUYEN, DUC M	
ART UNIT	**PAPER NUMBER**
2685	3

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/730,111	DAVIS ET AL.	
	Examiner	Art Unit	
	Duc M. Nguyen	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) ✓
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2. ✓
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the information disclosure statements submitted on 11/20/03 has been considered by the examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims **1, 6-9, 10, 12-13, 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Hudecek** et al (US 6,289,207) in view of **Tsuji** et al (US **6,385,261**).

Regarding claim **1**, **Hudecek** discloses a tunable radio with adjustable seek sensitivity, comprising :

- a radio receiver as claimed (see Fig. 3);
- an adjustable tuner as claimed (see Fig. 3 and col. 20, lines 23-39);
- a detector as claimed (see Fig. 3 and col. 20, lines 23-39);
- a seek input as claimed (see Fig. 3 and col. 20, lines 23-39);
- a controller for automatically adjusting the squelch level (seek sensitivity threshold) as a function of received signal levels (see Fig. 3 and col. 20, lines 23-39);

Here, although Hudecek fails to disclose the squelch level is determined based on the average value of received signal levels, it is noted that using such average value for computing a dynamic threshold for signal detection would have been obvious to one skill in the art of signal detection as disclosed by **Tsuji** et al (see Abstract, Fig. 3 and col. 4, lines 1-35). Therefore, it would have been obvious to one skill in the art to incorporate the above teaching of Tsuji to Hudecek for adjusting seek sensitivity threshold based on the average value as claimed, for improving the performance of the scanning feature.

Regarding claim **6**, the claim is interpreted and rejected for the same reason as set forth in claim 1 above, wherein it is clear the seek sensitivity threshold is proportional to the average value as claimed.

Regarding claims **8-9**, the claims are rejected for the same reason as set forth in claim 1 above. In addition, although Hudecek discloses a computerized radio receiver, it is clear that Hudecek's teachings would obviously be applicable to car radios as well. Therefore, it would have been obvious to one skill in the art to modify the above teachings of Tsuji and Hudecek for providing a car radio as claimed, for entertaining the driver of a car while on the road.

Regarding claim **7**, the claim is rejected for the same reason as set forth in claim 8 above. In addition, it is clear that Hudecek as modified would obviously disclose a seek pushbutton, for providing a convenience input to the driver of the car.

Regarding claims **10, 12**, the claim are interpreted and rejected for the same reason as set forth in claim 1 above.

Regarding claim **13**, the claim is interpreted and rejected for the same reason as set forth in claim 7 above.

Regarding claim **15**, the claim is interpreted and rejected for the same reason as set forth in claim 1 above.

Regarding claims **16-17**, the claims are interpreted and rejected for the same reason as set forth in claim 8 above,

4. Claims **2-5, 11, 14** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Hudecek** in view of **Tsuji** and further in view of **Morande** et al (US **6,526,268**).

Regarding claim **2**, **Hudecek** as modified would disclose all the claimed limitations, see claim 1 above, except for computing an initial average value of a predetermined number of signals having the highest signal strength. However, **Morande** discloses a TCS frequency determination method for scanning a plurality of RF channels, wherein the average value of a predetermined number of signals having the highest signal strength are obtained by iteratively filtering out-lying data (i.e, noises) from a set of sampled data (see **Abstract, Fig. 2** and **col. 2, lines 8-67**). Here, since all received signals would obviously comprise noises, their average value thus would not give a good estimate of broadcast signal strength, it would have been obvious to one skill in the art to further incorporate the above teaching of Morande to Tsuji and Hudecek for filtering out-lying data before estimating the average value, this process would result in that an initial average value of a predetermined number of signals having the highest signal strength is computed as claimed, for improving signal detection accuracy.

Regarding claim **3**, the claim is interpreted and rejected for the same reason as set forth in claim 2 above.

Regarding claims **4-5**, the claims are rejected for the same reason as set forth in claim 2 above. In addition, since Morande discloses up to 10 samples is used for averaging (see Fig. 2, block 215), it would have been obvious to one skill in the art to further modify Morande, Tsuji and Hudecek for providing the number of samples as claimed, for improving the signal estimation accuracy (i.e, optimal number based on trials-and-errors).

Regarding claim **11**, the claim is interpreted and rejected for the same reason as set forth in claim 2 above.

Regarding claim **14**, the claim is interpreted and rejected for the same reason as set forth in claim 4 above.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- **Jongepier** (US 4,648,127), Noise detector.
- **Bertranna** (US 6,208,848), Radio receiver squelch circuit with automatic adjustment of the squelch threshold.
- **Schwob** (5,732,338), Broadcast receiver capable of autonomous format-scanning, program identification and searching.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (703) 306-4531, Monday-Thursday (9:00 AM - 5:00 PM). Or to Edward Urban (Supervisor) whose telephone number is (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Duc M. Nguyen

Mar 18, 2004